REMARKS

In the sixth and final Office Action, dated September 24, 2003, the Examiner has rejected claims 1 and 4-53. On October 28, 2003, the Examiner and the undersigned conducted a telephonic interview regarding the cited reference relied upon by the Examiner to reject all pending claims, i.e. Kedar et al. (USPN 4,750,171) (hereinafter "Kedar"). The Examiner stated that he understood applicants' position on Kedar and requested that applicants explain their position in a response to the Office Action for his reconsideration of the rejections. Applicants would like to express their appreciation for the Examiner's time and consideration.

Presently, claims 1 and 4-53 are pending in the present application. Reconsideration and allowance of pending claims 1 and 4-53 in view of the following remarks are respectfully requested.

A.   Rejection of Claims 1 and 4-52 under 35 U.S.C. § 102(b)

The Examiner has rejected claims 1 and 4-52 under 35 U.S.C. § 102(b), as being anticipated by Kedar. Applicants respectfully disagree.

First, applicants would like to point out that claim 53 has not been listed by the Office Action as one of the pending claims. Applicants respectfully submit that the pending claims should include claim 53 and request a correction.

Regarding the Kedar patent, as discussed with the Examiner, it is respectfully submitted that certain inaccuracies and misnomers in Kedar's specification have made Kedar confusing. However, once the inaccuracies and misnomers in Kedar are clarified, as discussed below, it will become quite clear that Kedar describes a conventional modem interface in use at the time of its filing, i.e. July 11, 1986.

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In the Office Action, referring to FIG. 1 of Kedar, the Examiner points to col. 5, lines 62-68, where it is stated that:

> The group controller 12 provides control instructions for numerous peripheral functions which are performed by various peripheral function circuits such as Network Termination Circuit 22, Digital Station Interface 26, Digital Trunk Interface Circuit 32 and the like. (emphasis added.)

Next, the Examiner turns to col. 6, lines 26-30 of Kedar, which reads:

> A plurality of peripheral function circuits such as a modem pool 25 or an X.25 gateway, which will be described below, can be connected to the peripheral bus 16, which allow for high speed digital data transmission between the various endpoints connected to the peripheral bus 16, either directly, in the case of network or wideband endpoints, or indirectly, in the case of peripheral endpoints such as a Voice Data Keyset 46.

As discussed with the Examiner, Applicants respectfully submit that Kedar's inaccuracies and misnomers have led the Examiner to reach a conclusion that is not supported by Kedar, when Kedar is reviewed in more detail. For example, in the above excerpts, Kedar refers to Network Termination Circuit 22 as a peripheral function circuit. In FIG. 1, Network Termination Circuit 22 is shown in three places, one of which is the front portion of modem pool 25 for interfacing with bus 16. Also, in the other two places, Network Termination Circuit 22 is also in the front portion, which interfaces with bus 16. Other examples of peripheral function circuits are Digital Station Interface 26 and Digital Trunk Interface Circuit 32, which are also shown to be interfacing with bus 16. Therefore, Kedar's specification lacks logic as to how modem pool 25 is also a peripheral function circuit, when it is really its front portion, i.e. Network Termination Circuit 22 that interfaces with bus 16. In other words, when at col. 6, lines 26-30 Kedar states that modem pool 25 is a peripheral function circuits and can be connected to the TDM bus 16, it is really the front portion of modem pool 25, i.e. Network Termination Circuit 22 that is a peripheral function circuits and can be connected to the TDM bus 16.

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Furthermore, even though reference numeral 25 designates the modem pool, only the end portion of modem pool 25 includes modem modules, see reference numeral 24 in FIG.1 and modem module 192 in FIG 7. Accordingly, the term modem pool is a misnomer, because reference numeral 25 designates several other components besides modem modules 192, such as Network Termination Circuit 22 and Network Interface Circuit 28 (see FIGs. 1 and 7.)

Applicants respectfully submit that FIG. 7, which shows modem pool 25 in more detail, clarifies the confusion created by drafters of Kedar, as a result of their improper naming conventions and technical description of FIG. 1. As shown in FIG. 7, modem pool 25 includes Network Termination Circuit 22 (which is said to be controlled by group controller) as the interface for TDM bus 16. Further, network interface 28 also appears between modem modules 24 and Network Termination Circuit 22. Accordingly, TDM bus 16 controls Network Termination Circuit 22. Any data or command sent through TDM bus 16 is then transported via communication buses 154, 166 and 196, where it is communication bus 196 that interfaces with modem module 192. Bus 196 is not a TDM bus, and the modem module 192 is shown to have UARTs with RS-232 interfaces. Modem module 192 is said to include conventional modems (i.e. conventional modems in 1986), which are shown to have a UART (Universal Asynchronous Receiver Transmitter) having an RS-232 interface. Therefore, the modem modules 24 are not shown to have logical and physical channels. (See col. 17, line 51 - col. 18, line 37.)

FIG. 7 of Kedar clearly illustrates and its related description states that the modem modules 192 utilized by system 56 of Kedar are conventional modems using UARTs and standard RS232C interface for communication with system 56. See col. 17, line 51 - col. 18, line 37. Kedar further states:

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The modem pool 25 may also serve as a local access endpoint through which a terminal or host may be connected directly to the system, through a standard RS232C interface. (Col. 17, lines 53-56.)

Inside each modem module there are universal asynchronous receive and transmit chips (UART) 182 which are used to convert the signal sent along the network interface communication bus 196 to an asynchronous signal which is then fed to a conventional modem 186. Each modem module may contain multiple UARTs which are fed data from the network interface communication bus 196 under control of direct memory access controller 184. (Col. 18, lines 6-15.)

Also, as shown in FIG. 7, it is not Group Controller 12 that controls modem modules 192, but the information on bus 196, which is connected to the modem modules, is provided under the control of network interface microprocessor 176, which is run by the program stored in EPROM 180. (See col. 18, lines 1-3.) Therefore, unlike modem device of claim 1, which has logical channels, modem module 192 of FIG. 7 is shown to have an RS-232 interface, just like the prior art or conventional modems, as admitted in Kedar, which merely shows a physical channel. See col. 18, lines 1-6.

Thus, Kedar fails to show a modem "comprising at least one physical channel for transmitting data from a source to a receiver, said physical channel having a first logical channel and a second logical channel: and that "said first logical channel is configured to transmit only command information from the source to the modem for controlling the modem". Accordingly, claim 1 and its dependent claims 16-19 should be allowed.

Turning to claim 4, claim 4 recites "a communication method for use by a modem". With respect to rejection of claim 4, Kedar fails to show, for example, that modem module of Kedar is "receiving data information via a first logical channel", "receiving command information via a second logical channel", and "executing said command information". As explained above, Kedar shows bus 196 as the modem interface, which is not a TDM bus, for interfacing with

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modem module 192 of Kedar, which is a conventional modem using a conventional UART and RS232C interface. There is no disclosure, teaching or suggestion that bus 196 provides modem modules 192 of Kedar with data and commands on logical channels. Accordingly, claim 4 and its dependent claims 5-15 should be allowed.
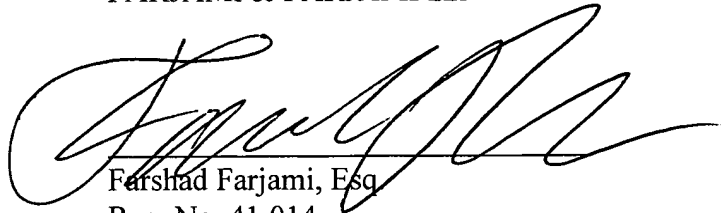
With respect to claim 20, as noted above, modem modules of Kedar are in communication with the communication bus 196, which is not described to be a TDM bus and does not include logical channels, but in fact communicates with modem modules via the UARTs 182. In contrast, modem device of claim 20 communicates with a host interface via "a physical channel interface, said physical channel including a logical command channel and a logical data channel; wherein said controller provides said command information to said physical channel interface via said logical command channel and provides said data information to said physical channel interface via said logical data channel, and wherein said command information includes a command type defining said logical command channel, and said data information includes a data type defining said logical data channel." There is no disclosure, teaching or suggestion in Kedar, whatsoever, that modem modules of Kedar communicate with the communication bus 196 in such manner. Accordingly, claim 20 and its dependent claims 21-30 and 53 should be allowed.

Independent claims 31 and 42, and their respective dependent claims 32-41 and 43-52, should also be allowed at least for one or more reasons stated above in conjunction with patentability of claims 1, 4 and 20.

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B. **Conclusion**

For all the foregoing reasons, an early allowance of claims 1 and 4-53 pending in the

present application is respectfully requested. The Examiner is invited to contact the undersigned

for any questions.

Respectfully Submitted;
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